

Friday, February 10<sup>th</sup>

- Reminder: Extra help Tuesday's and Thursday's at lunch hour
- Next Test/Quiz: Proportional Reasoning Quiz TODAY
- Next Assignment Due: TODAY

Today:

- Quiz today and Assignment due!
- Online Survey -- Need netbooks!
- Begin Section 1.3 Setting the Price
- Notes/Examples/Practice questions
- Classwork/Homework

# Lesson 3

1.3

**Setting a Price**

## MATH ON THE JOB

Maurice Meagher is the owner of Case Handyman and Remodeling, a business that performs renovation, remodeling, building, and designing services in Halifax, Nova Scotia. Maurice grew up in Port Hawkesbury, NS, where he went to high school at the Strait Area Education Recreation Center.

Maurice's job includes drawing up yearly and monthly budgets. He also calculates averages of past sales to help him forecast changes in staffing and cash flow. Another important part of Maurice's job is estimating how much it will cost to complete different building, renovation, or remodeling projects.

Maurice is estimating the cost of remodeling the floors of a home. He calculates that the floor space measures 1500 square feet. He determines that the cost of the entire job, including labour and materials such as ceramic tile and grout, will be \$27 000.00. What is the cost per square foot for the remodeling?



*Maurice's job involves estimating the cost of building decks and sunrooms.*

The price at which goods and services are sold has an impact on you whether you are a consumer or working in a business.

Prices rise and fall due to consumer demand and supply. If demand rises, suppliers are able to charge more. If demand falls, or if there is a large supply of a product, prices may fall.

Prices also rise and fall according to the cost of the materials and labour that go into the creation of a product or service. An additional amount, called **markup**, is added to these costs so that a profit can be made. For example, when the owner of a retail store buys items to re-sell, he or she buys them at a wholesale price. This price is then marked up and the item is sold at a higher retail price. The markup is usually a **percent** of the wholesale price.

### Percent:

- percent means "out of 100"
- a percentage is a ratio in which the denominator is 100

There are 3 ways to write percent:

$$30\% \qquad \frac{30}{100} \qquad 0.30$$

$$0.5\% = 0.005$$

A few basic examples using percentages:

#1 Change the following percents into decimals: ( $\div 100$ )

a.  $37\% = 0.37$

b.  $205\% = 2.05$

c.  $7\% = 0.07$

#2 Find the percent of the number:

80% of 60

$$0.80 \times 60 = 48$$

#3 Find the original number:

45% of what number is 10?

$$\frac{0.45x}{0.45} = \frac{10}{0.45}$$

$$x = 22.\bar{2}$$

## Monday, February 13<sup>th</sup>

- Reminder: Extra help Tuesday's and Thursday's at lunch hour
- Next Test/Quiz: Setting the Price/Sale Price/Currency Quiz Thursday
- Next Assignment Due: Thursday, February 16<sup>th</sup>

### Today:

- Go over answers to board questions from Friday
- Finish Section 1.3 Setting the Price
- Notes/Examples/Practice questions
- Classwork/Homework
- Begin Section 1.4 Sale Price

## Percent

## Copy & Complete

### Practice Questions:

#1 Change the following percents into decimals:

- a. 25%  $0.25$       b. 105%  $1.05$       c. 2%  $0.02$

#2 Find the percent of the number:

- a. 25% of 45      b. 33% of 50      c. 4% of 20  
 $0.25 \times 45 = 11.25$        $0.33 \times 50 = 16.5$        $0.04 \times 20 = 0.8$

#3 Find the original number:

- a. 30% of what number is 42?  $0.30x = 42$        $x = 140$   
b. 55% of what number is 12?  $0.55x = 12$        $x = 21.\overline{81}$   
c. 75% of what number is 20?  $0.75x = 20$        $x = 26.\overline{6}$

Markup: the difference between the amount a dealer sells a product for and the amount he or she paid for it

### Example:

If Bill sells a \$150 item at a 20% markup, how much will the item sell for?

$$\begin{aligned} 20\% \text{ of } 150 &= 30 \\ 0.20 \times 150 &= 30 \\ 150 + 30 &= 180 \\ 100\% + 20\% &= 120\% \\ 150 \times 1.20 &= 180 \end{aligned}$$

### Example 1

Arlene purchases fabric at a wholesale price for her custom sewing business in Cavendish, PEI. She pays \$46.00/m. She charges a markup of 20% on the fabric. What will Arlene charge her clients per metre?

$$46.00 \times 1.20 = \$55.20/\text{m}$$

or

$$46.00 \times 0.20 = 9.20 + 46 = \$55.20/\text{m}$$

Please copy this into your notes:

**FIGURE 1.1**  
**PST, GST, and HST in Atlantic Provinces**

	<i>GST</i>	<i>PST</i>	<i>HST</i>
Nova Scotia			15%
New Brunswick			13%
Newfoundland and Labrador			13%
Prince Edward Island	5%	10%	

### Example 2

A furniture store in Charlottetown, PEI, is selling a bedroom suite. The list price for the suite is \$1599.00. What will the total cost be, including GST and PST?

$$\begin{aligned} 1599.00 \times 0.15 &= 239.85 \leftarrow 15\% \\ + 1599.00 &\leftarrow 100\% \\ \hline \$1838.85 &\leftarrow 115\% \end{aligned}$$
$$1599 \times 1.15 = \$1838.85$$

### Mental Math and Estimation

If you set the price of a bike helmet at \$49.95 and sell 25, how much less income will your store generate than if you sold the same number at \$54.95?

$$49.95 \times 25 = 1248.75$$

$$\begin{aligned} 54.95 \times 25 &= 1373.75 \\ - 1248.75 & \\ \hline \$125.00 \end{aligned}$$

# Classwork

Pg. 32 # 1 to 6 (omit #3)



due  
Thurs.

Assignment questions:  
#1,2,3,5,8,9,13,14